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Ted Sturdevant
Director, Washington State Department of Ecology
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March 12, 2012

Dear Executive Louws and Director Sturdevant,

Whatcom Docs is a group of more than 180 physicians who live throughout Whatcom County, who coalesced to voice concern over the health impacts of the largest proposed coal shipping facility in North America. Additional **new research published in major medical journals** augments our concerns:

- A new study (Turner et al; see reference list at end of letter) published in a prominent medical journal showed a remarkable **15-27% increase in lung cancer deaths, in people that have never smoked**, for each increase of 10 ug/m³ of particulate matter (PM2.5). This study examined 1100 cancer deaths of people living in normal conditions, and not industrial exposure.
- Another study (Wellenius et al) examined the impact of transportation-related particulate matter (PM2.5) on stroke risk. Overall, the **risk of ischemic stroke was 34% higher** with moderate exposures. This is an unprecedented finding, and points to the danger of even short term exposure to levels of particulate pollution previously thought safe. This is highly relevant to the coal shipment proposal, as hundreds of thousands of people live along the rail corridor, and would be exposed to bursts of diesel particulate matter by frequent trains.
- A third study, (Mustafic et al), represents a "meta-analysis," in which data from 34 prior studies was re-analyzed, and indicated that **short-term exposure** to air pollution is a **trigger of myocardial infarction (heart attack)**. This data augments numerous prior studies, and has significant social implications, as unlike cigarette smoking, individuals exposed to air pollution have little control over their exposure.
- In another study (Wueve et al) exposure to particulate pollution was found to be a **strong predictor of cognitive decline**. Cognitive decline is one of the most significant and resource-intensive health issues facing our population, and few

modifiable risk factors have been identified, until now.

- A presentation at a national asthma and allergy meeting on March 4, 2012 (Bernstein, D.) described a new study that shows exposure to diesel particulate matter is associated with a **2-3 fold risk of wheezing in infants (an early measure of asthma)**. Asthma is a common disease that presents significant costs to society.
- It has been emphasized (Bhatia, R.) that there is significant spatial disparity in pollution distribution. "Concentrations of PM2.5 are known to be much higher near busy highways, rail yards, and ports than at regional monitors, but inadequate intraregional assessment means that these higher levels are often not considered by regulators". Thus, for accurate assessment, **pollution needs to be measured adjacent to the source, where people work, live, and play**. Relying on measurements taken at a regional air station provides a false sense of security.

The recent studies detailed above augment the concerns we previously outlined:

1. **Diesel particulate matter**, which is associated with impaired pulmonary development in adolescents; increased cardiopulmonary mortality and all-cause mortality; measurable pulmonary inflammation; increased severity and frequency of asthma attacks, ER visits, and hospital admissions in children; increased rates of myocardial infarction (heart attack) in adults; increased risk of cancer.
2. **Coal dust**, which is associated with several chronic respiratory; and environmental contamination through the leaching of toxic heavy metals.
3. **Noise exposure**, which is associated with cardiovascular disease; cognitive impairment in children; sleep disturbance and resultant fatigue; exacerbation of mental health disorders such as depression and anxiety.
4. **Frequent long trains at rail crossings**, which would result in delayed emergency response times.

Our concerns are backed by statements from the **American Heart Association** and the **American Lung Association**.

On Feb 24, 2012, a survey funded by the American Heart Association was announced that showed "**a majority of Washington State voters favor current legislation requiring the state to consider impacts on people's health when planning new transportation projects**" (www.healthimpactproject.org/news/in/poll-washington-state-voters).

The adverse effects of air pollution are real and measurable, even when levels of pollutants are below U.S. Environment Protection Agency (EPA) standards. This is widely recognized by scientists within the EPA, who have proposed tighter guidelines. **Existing regulatory frameworks are insufficient to protect human health.**

There are now over 150 Health Impact Assessments (HIAs) across the United States, conducted for much smaller projects, such as casinos, bus transportation routes, and for rebuilding the Seattle 520 bridge. As such, it is imperative that a Health Impact Assessment (HIA) be done in considering the largest coal shipping terminal in North America.

Considering: 1) the published, publicly-available research that clearly links particulate and noise pollution with numerous adverse health effects, 2) that hundreds of thousands of people live along the rail corridor in Washington, Idaho, and Montana, and 3) the burgeoning costs of health care; it would be socially and economically irresponsible to not consider these impacts when evaluating the Gateway Pacific Terminal.

Our group of Whatcom physicians has now been joined by physicians in King County and Skagit County in calling for a **cumulative and comprehensive Health Impact Assessment (HIA)** along the entire transportation corridor.

Additional medical data is detailed in our statement and appendices that are available on coaltrainfacts.org. All references are cited and are based on published, publicly-available studies.

Sincerely,

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Peter Goldmark, Washington State Commissioner of Public Lands
Dennis McLerran, Regional Administrator, U.S. Environmental Protection Agency
Tay Yoshitani, CEO, Port of Seattle
Joni Earl, CEO, Sound Transit
Bob Drewell, Executive Director, Puget Sound Regional Council
Craig Kentworthy, Executive Director, Puget Sound Clean Air Agency
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Greg Stern, Whatcom County Health Officer
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Howard Frumkin, Dean, School of Public Health, University of Washington

Newest medical research, references:

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Turner, M. et al. 2011. Long-term ambient fine particulate matter air pollution and lung cancer in a large cohort of never-smokers. *Am J Respir Crit Care Med*. 184(12):1374-81.

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